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ABSTRACT

A replication of an earlier study provided further support for the idea that effective principals are more accurate in their self-assessments than less effective principals. A review of the literature, of ratings made by ten nationally recognized educational experts, and of discussions with principals led to the selection of 33 important instructional leadership behaviors. A questionnaire designed to measure the use of these behaviors by principals was distributed to both the principals and their faculties in high-achieving and low-achieving elementary and secondary schools throughout California. In both elementary and secondary schools the principals' self-reports concerning their use of the leadership behaviors indicated no significant differences related to the schools' achievement levels. Compared with teachers in the high-achieving schools, the teachers in the low-achieving schools tended to agree with their principals significantly less often concerning the principal's use of the leadership behaviors. The degree of perceptual discrepancy in the low-achieving schools suggests that the self-reports of principals in those schools are not totally reliable as a means of determining the actual activities of principals in the schools. (PGD)

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PRINCIPAL/TEACHER PERCEPTUAL DISCREPANCY:
INSTRUCTIONAL LEADERSHIP IN HIGH AND
LOW-ACHIEVING CALIFORNIA SCHOOLS

by

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ABSTRACT

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Principal/Teacher Perceptual Discrepancy: Instructional Leadership in High
and Low-Achieving California Schools

Measurement in education often relies on questionnaires and other self-report instruments. The issue of response bias has long been identified as a concern when using self-report as a single experimental measure. The present study casts light on the subjects most likely to demonstrate bias on self-report and consists of a replication of an original study by Larsen with expansion of the sampling base to include elementary and secondary schools throughout California. Results of both studies suggest that effective principals are more accurate in self-assessment than less effective principals.

Literature review, plus the ratings of ten nationally recognized educational experts, and discussions with principals produced 33 important instructional leadership behaviors (ILBS). These 33 behaviors were included in a questionnaire which was distributed statewide to principals and teachers in high and low-achieving elementary and secondary California schools.

The study determined the degree to which principal/teacher agreement differed between high-achieving schools (HAS) and low-achieving schools (LAS) in regard to perceived implementation of ILBS.

Major findings of this study common to both elementary and secondary schools were: Principals' self-reports yielded no significant differences in implementation of ILBS between HAS and LAS. Second, teachers in HAS perceived their principals as demonstrating significantly greater implementation of ILBS than teachers in LAS. Third, there was some discrepancy between principals' and teachers' scores for both HAS and LAS, but this discrepancy was significantly greater in LAS.

In conclusion, it appears the principal/teacher agreement on the frequency of implementation of ILBS within the school is significantly higher in HAS than in LAS. The perceptual discrepancy in LAS suggests that the principals' self-report is not a totally reliable means of ascertaining actual behaviors implemented within schools.

Purpose

Measurement in education often relies on questionnaires and other self-report instruments. The issue of response bias has long been identified as a source of error when using self-report as a single experimental measure.¹ The present study suggests that self-report is not necessarily a highly reliable measure for some subjects, and that effective principals are more accurate in self-assessment than less effective principals.

The present study began in an effort to replicate and expand upon an earlier study of the relationship of instructional leadership behavior and student achievement.² While the initial study sampled high and low-achieving elementary schools in Los Angeles County, the present study samples schools throughout California and utilizes a more stringent criteria for applying the label high and low-achieving. The present study also samples all California secondary schools meeting the criteria.

Methods

At the time of the original study, a review of the literature generated 44 instructional leadership behaviors that appeared to be important. The list of 44 behaviors was submitted to ten educational experts who rated each on the dimension of importance. The 29 behaviors rated most important by the experts became the basis for the questionnaire. The questionnaire called for respondents to indicate the frequency with which they implemented each behavior or activity. Responses were along a 5-point Likert-type scale in which 5 = "Always", 4 = "Frequently", 3 = "Sometimes", 2 = "Rarely" and 1 = "Never." The questionnaire was distributed to principals and a random sample of six teachers from high-achieving and low-achieving elementary schools (K-6; K-8) in Los Angeles County.

High-achieving schools were defined as those schools in which the average score for both third and sixth grade students fell above the expectancy band** in both reading and math on the California Assessment Program (CAP) test. Low-achieving schools were defined as those in which the third and sixth grade scores fell below the expectancy band in both reading and math.

The teachers to participate in this survey at each school were determined by asking the principal to distribute the questionnaire to the six teachers whose surname began nearest the beginning of the alphabet. Using this criteria, three questionnaires were distributed at each school site to primary teachers and three questionnaires to intermediate teachers. The principal at each site and the six teachers were each asked to rate the degree to which each of the instructional leadership behaviors was implemented by the principal or his designee at their school site. Twenty high-achieving schools and 30 low-achieving schools returned questionnaires and were included in the final analysis. To be included in this final sample it was necessary that the principal and a minimum of three teachers return questionnaires from each school site.

Initially, in the data analysis, the mean questionnaire score for principals and teachers in high and low-achieving schools was displayed, and differences in overall means tested. These results are displayed in Table 1. However, instead of overall questionnaire score, the mean score per item is presented to allow better comparison with the replication study which used a questionnaire with four more items. In order to pursue the issue of teacher/principal discrepancy, the total questionnaire score for each teacher was subtracted from his or her principal's total questionnaire score to provide a deviation score.

**Expectancy band based on schools socioeconomic index, percent Aid to Families with Dependent Children (AFDC), percent Limited English Proficient (LEP) students.

Two different means were computed, one was a mean deviation score taking into account the sign of the direction of the deviation; the second mean score was computed without regard to the direction of the deviation. The first is an overall average of the degree of deviation, as well as the direction of that deviation. The second mean gives the magnitude of the deviation. These results are presented in Table 2.

TABLE 1
ORIGINAL ELEMENTARY STUDY
Mean Questionnaire Score - Mean Per Item
Principals and Teachers by School Type

	<u>N</u>	<u>Principal</u>	<u>N</u>	<u>Teacher</u>	<u>Discrepancy</u>
High-Achieving	20	4.24	96	4.16	.08
Low-Achieving	18	4.40	132	3.95	.45
Significance of difference of discrepancy					
<u>t</u> = 2.26 p < .05					

TABLE 2
MEAN DEVIANCE SCORE BY SCHOOL TYPE

School Type	MEAN DEVIANCE SCORE	
	Accounting for Direction	Not Accounting for Direction
High	+ 1.42	16.15
Low	+ 11.92	21.26
When accounting for direction, a positive score indicates that the principal's score is higher than that of the teachers'.		

The data analysis of this original study indicated that the principal self-report yielded no significant differences in the implementation of any of the 29 behaviors nor any significant differences in overall questionnaire scores. Thus, in order to determine which behaviors appeared to be related to achievement, it was necessary to use the teachers' report of the principal's behavior, rather than self-report.

In this study, 4 items, which failed to discriminate between high and low-achieving schools in the original study, were deleted and 8 new items added to the questionnaire producing a scale consisting of 33 instructional leadership behaviors. The sampling procedures were expanded to include all schools in California that scored above and below their expectancy band and met the criteria for inclusion. This is in contrast to the earlier study which targeted only elementary schools in Los Angeles County.

In order to be included in the replication study, elementary schools needed to score above their expectancy band on CAP in both third and sixth grade and in both reading and math consistently for a 3-year period to be categorized as high-achieving. Similarly, schools needed to score below their expectancy band on CAP for both third and sixth grade in reading and math consistently for a 3-year period to be categorized as low-achieving.

At the secondary school level, a school needed to fall below their expectancy band in all three areas, reading, language and math, consistently for a 3-year period in order to be included in the study. Language as well as the 3-year criteria were included since secondary school CAP testing occurs only at the 12th grade level. A high-achieving school must meet the same criteria in scoring above their expectancy band in all three subjects for three consecutive years. The methodology for the distribution of questionnaires was the same as in the original study. Twelve teachers instead of six were sampled in secondary schools across school departments.

Results

A total of 24 elementary schools, 16 high-achieving and 8 low-achieving, returned sufficient questionnaires to be included in the study. For inclusion, it was necessary that the principal and a minimum of three teachers (elementary) and six teachers (secondary) return the questionnaire and pass the test of internal consistency. (Three items were asked in reversed direction to test for consistency in response. Failure to answer any of the three in a consistent way caused the subject to be deleted.) At the secondary school level, 21 schools were included in Table 3.

TABLE 3
NUMBER OF RESPONDENTS

ELEMENTARY SCHOOLS			
	<u>Above</u>	<u>Below</u>	<u>Total</u>
Principals (Schools)	16	8	24
Teachers	76	38	114
Mean # Teachers/ School	4.75	4.75	4.75
SECONDARY SCHOOLS			
	<u>Above</u>	<u>Below</u>	<u>Total</u>
Principals (Schools)	9	12	21
Teachers	63	87	150
Mean # Teachers/ School	7.00	7.25	7.14

The results of the replication were similar to those in the original study. Principals of high and low-achieving elementary and secondary schools do not differ significantly in the way in which they depict their implementation of ILBS, but the teachers of high-achieving elementary and secondary schools perceive their principal as demonstrating significantly greater implementation of ILB than the teachers of low-achieving schools perceive their principal as implementing these behaviors. At both the elementary and secondary school level, there is a significantly greater discrepancy in principal/teacher ratings in low-achieving schools than high-achieving schools.

Tables 4 and 5 present the mean score per item for principals and teachers. Tables 6 and 7 present the mean discrepancy scores both accounting for direction and not accounting for direction as previously described.

TABLE 4
REPLICATION ELEMENTARY STUDY
OVERALL QUESTIONNAIRE SCORE - MEAN PER ITEM *

	<u>N</u>	<u>Principal</u>	<u>N</u>	<u>Teacher</u>	<u>Discrepancy</u>
Above	16	4.26	76	4.18	.08
Below	8	4.10	38	3.77	.33
Significance of Difference of Discrepancy					
$\underline{t} = 2.8 \quad p < .006$					

*Tables are presented in mean overall score per item rather than mean questionnaire score since the number of items on the questionnaire differed between the original and replication studies.

TABLE 5
NEW SECONDARY STUDY
OVERALL QUESTIONNAIRE SCORE - MEAN PER ITEM*

	<u>N</u>	<u>Principal</u>	<u>N</u>	<u>Teacher</u>	<u>Discrepancy</u>
Above	9	4.32	63	3.80	.52
Below	12	4.30	87	3.43	.87
Significance of Difference of Discrepancy					
$\underline{t} = 3.72 \quad p < .003$					

*Tables are presented in mean overall score per item rather than mean questionnaire score since the number of items on the questionnaire differed between the original and replication studies.

TABLE 6
 MEAN DEVIANCE SCORE BY SCHOOL TYPE
 ELEMENTARY SCHOOLS

School Type	<u>MEAN DEVIANCE SCORE</u>	
	Accounting for Direction	Not Accounting for Direction
High-Achieving	3.4	14.1
Low-Achieving	11.3	21.6
	$\underline{t} = 1.92$	$\underline{t} = 2.80$
	$p < .057$	$p < .01$

TABLE 7
 MEAN DEVIANCE SCORE BY SCHOOL TYPE
 SECONDARY SCHOOLS

School Type	<u>MEAN DEVIANCE SCORE</u>	
	Accounting for Direction	Not Accounting for Direction
High-Achieving	18.5	25.5
Low-Achieving	30.6	36.4
	$\underline{t} = 2.45$	$\underline{t} = 2.89$
	$p < .05$	$p < .01$

In the analysis of individual items, 16 of the ILBS were occurring significantly more often in high-achieving elementary schools than in low-achieving elementary schools according to teachers' report, and 12 items or behaviors occurred significantly more often in high-achieving secondary schools. However, if principal self-report had been the sole criteria, there was "no difference" in the implementation of any of these behaviors in high and low-achieving schools.

Conclusion

Overall, it is important to note that the study would have produced no result whatsoever had principals been asked to indicate their degree of implementation of ILBS and their teachers not been surveyed. Verbally all interpretations of differences in high-achieving schools versus low-achieving schools resides within the teachers' description of the principal's behavior.

Of significance, also, is that at high-achieving schools there is high agreement of principal and teacher perceptions, while teachers and principals are highly discrepant in perceptions of principal's behavior at low-achieving schools.

Among the explanations possible, the degree of harmony within a school may affect the performance of students. That is, the questionnaire may really measure school harmony or teachers' liking of the principal. Another possibility is that weak principals may be less reliable in reporting their actual behavior while their teachers remain candid. In the latter instance, teacher perceptions are crucial measures of the procedures followed within a school. Certainly it appears that self-report is not a totally reliable means of ascertaining the actual degree of procedure implementation within the school system.

NOTES

¹Kenneth Bailey, Methods of Social Research (New York: Macmillian Company, 1978) p.153; John Best, Research in Education (Englewood Cliffs: Prentice-Hall, Inc., 1977) p.344.

²Terry J. Larsen, Ed.D. "Identification of Instructional Leadership Behaviors and the Impact of Their Implementation on Academic Achievement," Dissertation Abstracts International 46, 3A (January 1985): 569.

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